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Income Valuation Module

Guide

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I. INCOME MODULE OVERVIEW

The Income Valuation Module is used to maintain income data, value income generating properties based on their revenue and expense streams using either a Direct Capitalization (DIR) rate or Gross Rent Multiplier (GRM), and provide income data for reporting and inquiry screens. Direct Capitalization and Gross Rent Multiplier's are used because they can be directly derived from the market and are easiest to defend. Using simple market-based income multiplier and capitalization techniques results in values that are easier to defend.

Both income methods use standard procedures outlined in the IAAO Property Assessment and Appraisal Administration textbook. The Direct Capitalization approach can be set up either to sum all of the revenues and subtract all of the valid expenses to calculate net income or it can be set up to use the standard formula for calculating effective gross income by subtracting the vacancy and collection loss from the potential gross, then adding in miscellaneous income and subtracting the other valid expenses from the effective gross income. The Income Value is then estimated by dividing the net operating income by the direct (overall) capitalization rate.

The GRM method is also straight forward. GRM's for various property types or market areas are derived by dividing the sale price by the rental income for those properties in the type or market area that have sold. This multiplier is then used to calculate value for income producing properties by multiplying the rental income by the GRM.

The Income Valuation Module permits multiple records (up to 99) per parcel to facilitate valuation of properties such as apartments where there are multiple apartment types and shopping malls where there are several anchor stores as well as numerous smaller stores mixed together. These records are maintained through the Income Data (INC) Screen.

The Income Valuation Module provides for income valuation using both market data and contract data. Market income data can be directly entered on the parcel or it can be extracted from tables for mass income valuation. Contract data is directly entered.

In both methods, the market data (overall capitalization rates, estimated price/unit of analysis, and expense rates) are developed outside of the Appraisal Plus system. These externally derived values are then loaded into the tables (in the case of Market Mass Income Models) or into the individual property data screens (for contract data). This means, that overall capitalization rates and GRM's may be developed in any manner the user desires such as OAR, Band of Investment, Mortgage Equity, etc. If an appraiser desires to use advanced yield capitalization techniques, the various rates must be synthesized into an Overall Rate OAR for final valuation within the income module.

II. INCOME APPROACHES

The Income Module provides for two Income Approaches:

- Gross Rent Multiplier (GRM) or
- Direct Capitalization (DIR).

Gross Rent Multiplier (GRM)

The Gross Rent Multiplier is the simplest of the two Income Approaches and only requires Revenue, Rate/Multiplier, No. Units, Unit Type (UT), and Unit Price entries (see figure 1).

If an Income Model is to be used, the only entries required are:

1. Income Approach (GRM)
2. Income Use/Type (e.g., OFFL for Office Low Rise)
3. Rental Units (e.g., net rentable area, number of months, number of rooms, etc.)
4. Unit Type (e.g., SF for square feet or RM for rooms)

If the Contract Valuation is used, the only additional entries are:

1. Rate/Multiplier
2. Unit Price (no expense entries are required for the Gross Rent Multiplier Approach).

Figure 1 - Income Detail Screen Example with the Gross Rent Multiplier Income Approach and Income Use/Type Gross (G)

Annual Revenues	Pct	No. Units	UT	Unit Price
Rental Data	0	12	MO	5000.00
Rental Income				60000
Other Income				0

Annual Expenses	Pct	Exp/Unit	Gross Exp
Total Expenses	.00	.00	0
Net Income	0.00	0.0000	0

Summary	Value
Revenues	60000
Expenses	0
Net Income	0
Gross Rent Mult	5.50
Subtotal	330000
Excess (+)	0
TPP (-)	0
Income Value	330000
Income Total	1070900

Direct Capitalization (DIR)

The Direct Capitalization Approach uses both Revenues and Expenses to calculate a Net Income which is then capitalized using an Overall Capitalization Rate (OAR) to produce the Income Value (see figure 2).

If an Income Model is to be used, the only entries required are:

1. Income Approach (GRM)
2. Income Use/Type (e.g., OFFL for Office Low Rise)
3. Rental Units (e.g., net rentable area, number of months, number of rooms, etc.)
4. Unit Type (e.g., SF for square feet or RM for rooms)
5. Other Income optional

If the Contract Valuation is used:

1. Rate/Multiplier
2. Unit Price
3. All of the Expense entries are required

Figure 2 - Income Detail Screen Example with the Direct Capitalization Income Approach and Contract Valuation Income Use/Type Gross (G)

Income STATE OF OKLAHOMA CURRENT YEAR

File Menu Functions Help

New Save Back Forward Next Edit

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Parcel Number: 0000-01-20N-03W-1-100-00 No. 2

Income Data

Income Approach: DIR Direct Cap Rate: 10.00

Income Use/Type: G Gross

Rate/Multiplier: 10.00

Annual Revenues

	Pct	No. Units	UT	Unit Price
Rental Data	0	5000	SF	20.00
Rental Income				100000
Other Income				0

Annual Expenses

	Pct	Exp/Unit	Gross Exp
VAC & COLL	10.00	2.00	10000
OPERATING EXP	48.00	9.60	48000
MANAGEMENT	6.00	1.20	6000
MISCELLANEOUS	2.00	.40	2000
Total Expenses	66.00	13.20	66000
Net Income	34.00	6.80SF	34000

Summary

Revenues	100000
Expenses	66000
Net Income	34000
Direct Cap Rate	10.00
Subtotal	340000
Excess (+)	0
TPP (-)	0
Income Value	340000
Income Total	1070900

Income Notes

III. MARKET MASS INCOME VALUATION OVERVIEW

The Market Mass Income Valuation Models (Models) have the capability to use both the Direct Capitalization and GRM income approaches. Models are used when sufficient market data is available to model the income approach using typical local market revenue and expense unit prices or percentages. These market models can then be applied on a mass basis to similar properties.

The appraiser can create any number of Income Models in the Income Use (IUSE) Table. This allows the appraiser to then reappraise entire income classes easily and to mass update all properties within the class with a single set of updates. For additional information on how to set up Income Models see section VI. Market Mass Income Model Setup.

Once a model is input in the Income Use Table (IUSE), the appraiser enters the user-defined Income Use Code from the Income Use Table, such as OFFL (Office-Low Rise) as shown in figure 3. The Revenue Unit Price and Expense fields are generated from the models set up in the IUSE Table, leaving only 5 data entry fields to be keyed:

1. Income Approach (Direct Capitalization or GRM)
2. Income Use/Type (e.g., OFFL for Office Low Rise)
3. Rental Units (e.g., net rentable area or number of rooms)
4. Unit Type (e.g., SF for square feet or RM for rooms)
5. Other Income (optional)

Other than the above entered data, the data either comes from the table based on the Income Use Code or is a calculated value. Figure 3 is an example of the Income Detail Screen with a user-defined OFFL Income Use Code.

Figure 3 - Income Detail Screen Example with the Mass Income Model (OFFL) Income Use/Type Code

Income STATE OF OKLAHOMA CURRENT YEAR

Parcel Number: 0000-01-20N-03W-1-100-00 No. 3

Income Data

Income Approach: DIR Direct Cap Rate

Income Use/Type: OFFL OFFICE Low Rise

Rate/Multiplier: 10.60

Annual Revenues

	Pct	No. Units	UT	Unit Price
Rental Data	0	5000	SF	20.00
Rental Income				100000
Other Income				15000

Annual Expenses

	Pct	Exp/Unit	Gross Exp
Vacancy & Coll	10.00	2.00	10000
Operating Exp	50.00	10.00	50000
Management	10.00	2.10	10500
Miscellaneous	2.00	.40	2000
Total Expenses	72.50	14.50	72500
Net Income	27.50	8.50/SF	42500

Summary

Revenues: 115000

Expenses: 72500

Net Income: 42500

Direct Cap Rate: 10.60

Subtotal: 400943

Excess (+): 0

TPP (-): 0

Income Value: 400943

Income Total: 1072900

Income Notes:

IV. MARKET MASS INCOME VALUATION DATA ENTRY

Step 1

First go to the Income Summary Screen using the Data Entry Menu or the Jump (Alt-J) function. **To add** a new Income Detail Screen, press the New Icon. **To change or view** an existing Income Detail Screen left-click on the Income Record you wish to view and press the Edit Icon if you wish to make changes.

Step 2

Your cursor is now in the Income Approach field. The Income Approach field determines whether the Net Income will be capitalized (enter DIR) or the Gross Revenue multiplied (enter GRM) to calculate the Income Value for this record.

Step 3

Tab to the Income Use field and enter a valid Income Use/Type from the IUSE Table to specify the Mass Income Model to be applied (e.g. OFFL). The code must match an IUSE key. (Double-click Income Use/Type to view the codes.)

Step 4

Tab twice to by-pass the Rate/Multiplier field which will come from the IUSE Table. Optionally you may enter the Percent Rentable in the Pct field. This field is informational only and can be left blank.

Step 5

Tab to the No. Units field and enter the annual rentable units (e.g. 5000 for 5,000 square feet or 12 for 12 months, etc.) in the No. Units field. Then tab and enter the type of rentable units (e.g. SF for square feet, MO for months, etc.) in the UT field. The valid user-defined UT Codes are maintained in the Net Rentable Unit Type (RUTTP) Table. (Double-click the UT field to view the codes.)

Step 6

Click on the Save Icon or optionally Tab to the Other Income field and enter the annual sum of non-rental income (e.g. laundry, parking, etc.) and click on the Save Icon.

After the Save is performed the Expenses and Net Income are summarized and the Income Value is summarized for that record:

Based on the OFFL Income Use code, the Income Use (IUSE) Table supplies all the Annual Expenses data: the Pct (percentage) data, Exp/Unit (expense per unit) data, and the Gross Exp (Gross Expense) amounts using the Mass Income Model from the IUSE Table (see figure 4). *Note: If the user does try to enter data into of the fields maintained by the Income Model, the IUSE Table data (based on the Income Use code) will override the user's entries.*

Figure 4 - Income Detail Screen Example using the Mass Income Valuation and the OFFL Model from the IUSE Table.

Income Data

Income Approach: DIR Direct Cap Rate: []
 Income Use/Type: OFFL OFFICE Low Rise
 Rate/Multiplier: 10.60

Annual Revenues

Rental Data	Pct	No. Units	UT	Unit Price
0		5000	SF	20.00
Rental Income				100000
Other Income				15000

Annual Expenses

	Pct	Exp/Unit	Gross Exp
Vacancy & Coll	10.00	2.00	10000
Operating Exp	50.00	10.00	50000
Management	10.00	2.10	10500
Miscellaneous	2.00	.40	2000
Total Expenses	72.50	14.50	72500
Net Income	27.50	8.50SF	42500

Summary

Revenues	115000
Expenses	72500
Net Income	42500
Direct Cap Rate	10.60
Subtotal	400943
Excess (+)	0
TPP (-)	0
Income Value	400943
Income Total	1072900

The Total Value from Income is summarized on the Income Summary Screen which displays a summary line for each Income Record and the Total Value from Income in the lower right corner (see figure 5).

Figure 5 - Income Summary Screen Example

No.	Revenue	Expenses	Net-Inc	Subtotal	Excess	TPP	Inc-Value
001	60000	0	0	30000	0	0	30000
002	100000	66000	34000	34000	0	0	34000
003	115000	72500	42500	400943	0	0	400943

3 Total Income Records Total Value 1070900

V. CONTRACT INCOME VALUATION OVERVIEW

The Contract Income Method is so named because you can use this method to enter either market data or contract data obtained from income statements provided by the taxpayer. This method is generally used on an exception basis to handle classes of parcels that are too small or where insufficient data is available to develop a Mass Income Model. This method can be used to enter contract (actual revenue and expense data from the owner or similar property income statements) or market data derived from market research. Parcels using the Contract Income Method require all of the data to be keyed and cannot be mass updated from the tables. Figure 6 shows an example of a parcel valued using contract data.

Figure 6 - Income Detail Screen Example using the Income Approach/Type (DIR) and the Income Use/Type (E).

Income Data

Income Approach: DIR Direct Cap Rate

Income Use/Type: E Gross

Rate/Multiplier: 10.00

Annual Revenues

	Pct	No. Units	UT	Unit Price
Rental Data	0	5000	SF	20.00
Rental Income				100000
Other Income				0

Annual Expenses

	Pct	Exp/Unit	Gross Exp
VAC & COLL	10.00	2.00	10000
OPERATING EXP	50.00	9.00	45000
MANAGEMENT	10.00	1.80	9000
MISCELLANEOUS	2.00	.36	1800
Total Expenses	65.80	13.16	65800
Net Income	34.20	6.84SF	34200

Summary

Revenues: 100000

Expenses: 65800

Net Income: 34200

Direct Cap Rate: 10.00

Subtotal: 342000

Excess (+): 0

TPP (-): 0

Income Value: 342000

Income Total: 1070900

The Contract Income Valuation allows the appraiser to choose one of four calculations for each Income Record:

1. Effective Gross Income Percent Calculation:

The Effective Gross Income Percent calculation takes input from the Percent Column. The first entry is assumed to be for Vacancy & Collection and is assumed to be the percentage of the Gross Revenue (e.g. 10 = 10% of the Gross Rent Revenues). Subsequent entries are calculated assumed to be the percentage of the Effective Gross Income. The Effective Gross Income is:

$$\text{Effective Gross Income} = \text{Gross Rent Income} - \text{Vacancy \& Collection} + \text{Other Revenues}$$

For example, if Gross Rent Revenue = \$100,000, Other Income = \$15,000 and Vacancy & Collection = 10%:

Effective Gross Income = \$100,000 - \$10,000 + \$15,000 = \$105,000

Therefore every subsequent expense would be based on its percentage of \$105,000 (e.g. Management Expense of 10% = \$10,500).

2. Percent of Gross Income Calculation:

The Percent of Gross Income calculation also takes its input from the Percent Column. However, **all** entries are assumed to be a percent of the Gross Rent Income.

For example, if Gross Rent Revenue = \$100,000, Other Income = \$15,000 and any expense = 10%:

Gross Rent Income = \$100,000

Therefore every expense would be based on its percentage of \$100,000 (e.g. Management Expense of 10% = \$10,000).

3. Expense per Unit Income Calculation:

The Expense per Unit Income calculation takes input from the Exp/Unit Column. Entries are assumed to be based on the Unit Type (UT) field and calculations are based on the No. Units field.

For example, if No. Units is 5,000 and the UT is SF for square feet:

Each expense is assumed to be annual totals per square foot and is multiplied by 5,000 (e.g. Management Expense of \$1.00 = \$5,000).

4. Gross Expenses Income Calculation:

The Gross Expense Income calculation takes input from the Gross Exp Column. Entries are assumed to be annual totals and often come directly from a taxpayer provided Income Statement.

For example, if the Income Statement shows \$650/month for Management Fees, \$7,800 would be input ($\$650 \times 12 = \$7,800$) in the Gross Exp. Column.

VI. CONTRACT INCOME VALUATION DATA ENTRY

Step 1

First go to the Income Summary Screen using the Data Entry Menu or the Jump (Alt-J) function.

- **To add** a new Income Detail Screen, left-click the New Icon.
- **To change or view** an existing Income Detail Screen left-click on the Income Record you wish to view and press the Edit Icon for changes.

Step 2

Your cursor is now in the Income Approach field. The Income Approach field determines whether the Net Income will be capitalized (enter DIR) or the Gross Revenue multiplied (enter GRM) to calculate the Income Value for this record.

Step 3

Tab to the Income Use field and enter one of the four valid Contract Income Use Codes:

- E for Effective Gross Income Percent calculation;
- P for Percent of Gross entry and calculation;
- U for Expense per Unit entry and calculation; or
- G for Gross Expenses entry and calculation.

This entry identifies that the Contract Income Method will be used and which of the three categories of expenses (Effective Gross Percent or Percent of Gross (PCT), Expenses per Unit (Exp/Unit), or Gross Expenses (Gross Exp)) will be entered.

Step 4

Tab to the Rate/Multiplier field and enter an Overall Capitalization (Cap) Rate (for example 10.6 = 10.60%) or a Gross Income Multiplier (GRM).

Step 5

Tab to the Percent Rentable field. Optionally you may enter the Percent Rentable in the Pct field. This field is informational only and can be left blank.

Step 6

Tab to the No. Units field and enter the annual rentable units (e.g. 5000 for 5000 square feet or 12 for 12 months, etc.) in the No. Units field. Then tab and enter the type of rentable units (e.g. SF for square feet, MO for months, etc.) in the UT field. The valid user-defined UT Codes are maintained in the Net Rentable Unit Type (RUTTP) Table.

Step 7

Optionally Tab to the Other Income field and enter the annual sum of non-rental income (e.g. laundry, parking, etc.) or left-click in the Annual Expenses. The appraiser then enters a Description, tabs and enters a Value (in this example a Gross Expense) and continues until all of the expenses have been entered (see example, Figure 7):

Figure 7 - Income Detail Expense Screen Example with the Gross Income (G) Expenses

Annual Exp.	Pct.	Exp. / Unit	Gross Exp.
VAC & COLL	10.00	1.00	10000
OPERATING EXP	48.00	4.80	48000
MANAGEMENT	6.00	.60	6000
MISCELLANEOUS	2.00	.20	2000
	.00	.00	0
	.00	.00	0
	.00	.00	0
	.00	.00	0
	.00	.00	0
	.00	.00	0
	.00	.00	0
	.00	.00	0
	.00	.00	0
	.00	.00	0
	.00	.00	0
	.00	.00	0
	.00	.00	0
	.00	.00	0
	.00	.00	0
	.00	.00	0
	.00	.00	0
	.00	.00	0
	.00	.00	0

Step 8

Optionally click on the Recalc Button to calculate the protected fields in the Expenses window or the Done Button to go back to the Income Detail Screen. In addition you may click on the Cancel Button to void your entries and return to the Income Detail Screen.

Step 9

Click on the Save Icon.

After the Save is performed the Expenses and Net Income are summarized and the Income Value is summarized for that record:

Based on the DIR Income Approach and the G Income Use/Type code, all of the Total Annual Expenses (the Pct (percentage) data, Exp/Unit (expense per unit) data, and the Gross Exp (Gross Expense) amounts, the Net Income, the Income Value for the Record and the Income Total values are summarized (see figure 8):

Figure 8 - Income Detail Screen Example using the Income Approach/Type (DIR) and the Contract Income Use (G).

The Total Value from Income is summarized on the Income Summary Screen which displays a summary line for each Income Record and the Total Value from Income in the lower right corner (see figure 9).

Figure 9 - Income Summary Screen Example

No.	Revenue	Expenses	Net-Inc	Subtotal	Excess	TPP	Inc-Value
001	60000	0	0	330000	0	0	330000
002	100000	66000	34000	340000	0	0	340000
003	115000	72500	42500	400943	0	0	400943

3 Total Income Records Total Value 1070900

VII. MARKET MASS INCOME MODEL SETUP

Market Mass Income Models are set up using the Income Use (IUSE) Table to store market data including Revenues, Capitalization Rates/Gross Rent Multipliers, and Expenses (see Figure 10).

Figure 10 - Income Use (IUSE) Table

Code	Data Description
IUSE	I12 Income Use Table
XXXXXXXXXX XXX XXX	XXXXXXXXXXXXXXXXXXXX 99999999X XX 9999 X
OFFL DIR	OFFICE Low Rise 00002000 SF 1060
OFFL DIR 01	Vacancy & Coll 00001000 0000 P
OFFL DIR 02	Operating Exp 00001000 0000 U
OFFL DIR 03	Management 00001000 0000 E
OFFL DIR 04	Miscellaneous 00002000 0000 G
P	Percent 00000000 0000
P DIR	Percent 00000000 0000
P GRM	Percent 00000000 0000
STC DIR	STRIP COMM'L 00003500 SF 1100
STC DIR 01	VAC/COLL 00000500 0000 P
STC DIR 02	MGT 00000500 0000 E
STC DIR 03	OPERATING 00000635 0000 U
STC-DT/NW DIR	STRIP COM-DT/NW 00003250 SF 1100
STC-DT/NW DIR 01	VAC/COLL 00000750 0000 P
STC-DT/NW DIR 02	MGT 00000500 0000 E
STC-DT/NW DIR 03	OPERATING 00000850 0000 U
STRIP COMM DIR	STRIP COMM'L 00002000 SF 1060
STRIP COMM DIR 01	VACANCY 00000100 0000 P
STRIP COMM DIR 02	MISCELLANEOUS 00000800 0000 E
STRIP COMM DIR 03	MAINTENANCE 00000100 0000 E
STRIP COMM DIR 04	OPERATING EXP 00005000 0000 E
STRIP COMM DIR 05	UTILITIES 00000100 0000 E
STRIP COMM DIR 06	OTHER 00005000 0000 G

IUSE Table Key

The 3-part IUSE Table Key is comprised of:

- A 10 digit user-defined Income Model Name (e.g. OFFL for Office, Low Rise, 11 for Strip Commercial, STC-DT for Strip Commercial Downtown, OFFL-N for Office Low Rise on the North side, etc.).
- A 3 digit Income Approach that must be either DIR for Direct Capitalization Rate or GRM for Gross Rent Multiplier.
- A 2 digit Sequence Number:
 - A blank Sequence Number is required and indicates it is the record which identifies the Mass Income Model and contains the Revenue and Rate/Multiplier data.
 - A 2-digit numeric value (e.g. 01, 02, 03, through 20) specifies the order of the Expense and contains the description and expense values.

IUSE Table Data Mass Income Model (Blank Sequence Number) Record

The 5-part IUSE Table Data is comprised of:

- A 15 digit user-defined Income Model Name description (e.g. Office Low Rise, Strip Comm'l, Strip Comm'l-DT, Strip Comm'l-N, etc.).
- A 8 digit annual revenue rate value with a 1 digit Sign (e.g. 00002000 is \$20.00 annual revenue rate). Enter leading zero's and leave sign blank
- A 2 digit annual revenue unit type field (e.g. SF for an annual rate per square foot, MO for an annual rate per month, etc.)
- A 4 digit annual Overall Capitalization Rate or Gross Rent Multiplier (e.g. 1060 for an Overall Capitalization Rate, 0575 for an Annual Gross Rent Multiplier of 5.75, etc.)
- A 1 digit Expense Type Code field that is left blank.

IUSE Table Data Expense (Numeric Sequence Number 01-20) Record

The 5-part IUSE Table Data is comprised of:

- A 15 digit user-defined Expense description (e.g. Vac & Coll, V&C, Operating Exp, Management, etc.).
- A 8 digit annual expense value with a 1 digit Sign (e.g. 00002000 is:
 - \$20.00 for an annual Unit Price (U) such as per square foot;
 - 20.00% for an annual expense as a Percent of Effective Gross (E) or Percent of Gross (P);
 - \$2,000 for an annual Gross Expense, etc.)
- A 2 digit annual revenue unit type field (e.g. SF for an annual rate per square foot, MO for an annual rate per month, etc.) which can be left blank.
- A 4 digit annual Overall Capitalization Rate or Gross Rent Multiplier which should always be 0000 for expenses.
- A 1 digit field for one of the four valid Expense Type Codes (that are the same as the calculation codes from the Contract Income Approach but are used so that any combination of them are available for use as Mass Income Model expenses):
 - E to identify the expense as based on Effective Gross Income;
 - P to identify the expense as based on Percent of Gross Rent;
 - U to identify the expense as based on Expense per Unit; or
 - G to identify the expense as based on Gross Expenses.